Delta Vision

Context Memorandum: Institutional Governance Affecting Delta Water Management

This context memorandum provides critical information about the institutional governance that affects Delta water management (water governance) to support policy making. As they are developed, the context memos will create a common understanding and language about the critical factors in establishing a Delta Vision.

This is an iterative process and this document represents the beginning of a dialogue with you about how best to understand water governance and to inform recommendations by the Delta Vision Blue Ribbon Task Force. You have two weeks to submit comments that may be incorporated into the next iteration.

You may submit your comments in two ways: either online at dv_context@calwater.ca.gov or by mail. If you are using mail, please send your comments to: Delta Vision Context Memo: Water Governance, 650 Capitol Mall, 5th Floor, Sacramento, CA 95814.

Your attributed comment will be posted on the Delta Vision web site (http:www.deltavision.ca.gov). Please cite page and line number with specific comments; general comments may be keyed to sections.

Your participation in this iterative process is valuable and important and is greatly appreciated. Thank you for your comments.

Context Memorandum: Water Governance

Iteration 1: April 27, 2007

Section 1. General Policy

The purpose of this context memorandum is to provide a succinct report on the laws, directives, and overall governance structure that drive the operations and management of water supplies used in or conveyed through the Delta.

The Delta water management governance structure is a complex network of interacting laws and agencies each with overlapping goals and mandates. In some cases, the laws and agencies that shape Delta water management are directed at general Delta protection while other laws and agencies are directed at protecting resources within, or services dependent upon, the Delta. The goals and objectives of these laws and agencies are not always aligned and the result is a twisted interplay of governing structure and regulations that complicate coordinated and effective Delta water management.

This context memorandum: (1) describes the water rights laws applicable to Delta water management; (2) outlines the federal and state statutes applicable to water management in the Delta; (3) summarizes implementing agency responsibilities; (4) identifies the implementing agencies regulatory actions that impact Delta water management; (5) identifies the policy implications of conflict in law and regulatory implementation.

The following fundamental policy questions frame the key issues embodied in this context memo:

- How do governing agencies meet their legal mandates regarding specific resources in the context of multiple demands for the same resources?
- How can local, state, regional, and federal law be reconciled to best meet the water management needs of the Delta?
- How can incongruencies in the implementation of laws and regulations as well as planning mechanisms among land use, water, and environmental agencies – even at the same level of government – be reconciled to meet the water management needs of the Delta?
- How can water rights be protected in light of competing public demands for alternative water uses and the need for water conveyance through the Delta?

In short, Delta water governance may need to be re-assessed to meet the public objective of sustainable management of the Delta.

Section 2. Water Rights

A water right in California is a usufructuary right meaning that a water right holder has the right to use water but not a right to the *corpus* of the water.[1] Other states, such as Texas, have more expansive property rights in water. The use of water supplies in California is derived from either a right to divert water or a contract entitlement. This section describes the ability to use water under these legal mechanisms.

California water law is complex, incorporating aspects of century old mining customs, Roman law, English common law, judicial and administrative decisions, statutes, and local ordinances. Adding to the complexity, California recognizes several categories of water rights, each relating to various characteristics of land and water. Surface water rights are generally classified as riparian, appropriative, or contract rights, while water rights for underground waters are generally classified as overlying or appropriative. The type of right that attaches to a water source is important, particularly in light of the regulatory structure linked to the different rights and the existing demands for agriculture, municipal and industrial uses, and the environment. All water rights are further limited by Article X, Section 2 of the California Constitution which requires that water be reasonably used for beneficial purposes.

Riparian Rights. Riparian rights confer upon the owner of land contiguous to the watercourse the right to a reasonable and beneficial use of water on his land. The water right is considered part of the land itself and the water need not be regularly used in order for the right to exist. Riparian landowners share the water supply in their watershed. No riparian has a priority right over another riparian water user and no riparian is entitled to more water than another riparian. The correlative nature of the right requires all riparians to communally reduce their uses in times of scarcity in order to ensure some water use for all. Each riparian right is superior to any appropriative right (regardless of the appropriator's pre-1914 status) in that appropriators must curtail usage in times of short supply before any riparian is required to curtail usage.

Appropriative Rights. The doctrine of prior appropriation is a system of allocation that confers the best right to the person who first puts the water to beneficial use – generally characterized as "first in time, first in right." There are generally two types of appropriative rights in California – those rights arising before 1914 and those rights arising after 1914. "Pre-1914 rights" are not subject to the jurisdiction of the State Water

[1] Legally, "corpus" is the property for which a trustee is responsible. In this case, the State of California is responsible for all water in the state and grants the right to use water to various entities. This idea provides a segway into the discussion of the Public Trust Doctrine later in this document

Resources Control Board. In other words, none of the SWRCB's application and permitting requirements are applicable to pre-1914 water rights. Pre-1914 rights are subject to the jurisdiction of the courts. Post-1914 rights are subject to the SWRCB's application, permitting, and licensing requirements.

Water Code Section 1485. Water Code Section 1485 provides that a city that disposes wastewater into the San Joaquin River may divert an amount of water up to the amount of the wastewater released. A precedent was recently set by the City of Stockton for the diversion of water from the San Joaquin River pursuant to section 1485 of the California Water Code. This type of diversion can only apply to wastewater disposed of in the San Joaquin River as there are no other provisions in the water code for this type of arrangement.

Area of Origin. A whole body of water rights law – mostly untested – is the area of origin, county of origin, watershed of origin, and Delta protection statutes. These laws were developed to retain the priority to subsequent appropriative uses within an area, county, or watershed, as against out-of-basin permitted appropriations. Specifically, they were enacted to protect local water users from out of basin appropriations from the Central Valley Project and State Water Project. Thus, area of origin rights consist of a priority right to satisfy present uses, as well as a priority right to satisfy future beneficial uses within a specifically identified geographic area.

The Delta Protection Act grants area of origin protection to the Delta. Specifically, the Act declares as a policy of the state "that no person, corporation or public or private agency or the State or the United States should divert water from the channels of the Sacramento-San Joaquin Delta to which the users within said Delta are entitled.[2] This statute has never been addressed in a court and there are ambiguities within the body of law that will require resolution.

[2] Water Code sections 12201 and 12203.

The Public Trust Doctrine. The Public Trust Doctrine obligates the state to preserve "trust resources" for current and future generations. This relatively recent doctrine is a judicially superimposed right upon the California system of water rights. The Public Trust Doctrine requires the state to take the public trust into account in the planning and allocation of water resources and to protect public trust uses where feasible and consistent with the public interest. The key issue here is that holders of valid appropriative rights have no vested rights that are barred from reconsideration of the diversion's propriety under the Public Trust Doctrine. Accordingly, the public trust doctrine provides some means for the State to reconsider existing water rights for trust purposes.

Groundwater rights. In California, groundwater is not regulated under a statewide permit system. Property owners with land overlying groundwater can simply drill wells and extract water for use on the overlying land. Much like riparian water users, the overlying users have shared water rights. The correlative nature of the right requires all overlying users to communally reduce their uses in times of scarcity in order to ensure some water use for all. Under this doctrine, there are no junior or senior overlying users who gain priority by pumping first or pumping more.

If there are groundwater supplies in a basin that are surplus to the overlying owners' needs, then this water is available for appropriation by non-overlying users for use on non-overlying lands. Most public water purveyors that use groundwater utilize the appropriative right. Here, the hydrology of the basin is the determining factor. If the appropriation of groundwater for the non-overlying use will not cause the basin to become overdrafted or injure other users of water, then an appropriation of groundwater for use on non-overlying property is allowed. Groundwater overdraft is defined as the condition of a groundwater basin or subbasin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years, during which the water supply conditions approximate average conditions (DWR 1998). Overdraft can be characterized by groundwater levels that decline over a period of years and never fully recover, even in wet years.

Contract rights. Aside from rights to divert surface water under the regulatory scheme described above, entitlements to surface water supplies can be obtained through contracting with entities that have state granted appropriative rights. Two entities – the Bureau of Reclamation through the Federal Central Valley Project (CVP) and the California Department of Water Resources through the State Water Project (SWP) – hold water rights that are delivered to end users through contracts. The CVP and SWP contractors' water rights are derived from amounts specified in the contracts and the annual allocations that are based upon statewide hydrology and joint operations of the CVP and SWP projects. More often than not, the water allocations to each

contractor in a normal year are below the water supplies identified in the contracts. Accordingly, these water supplies may significantly vary on a year to year basis, and hence, may potentially be unreliable.

Section 3. Statutory Law Affecting Delta Water Management

Further complicating Delta water supply management are numerous Federal and State laws and regulations which affect water use in the Delta and water conveyance through the Delta . These laws implicate Delta water supply management by creating new needs and uses for the scarce resource. The following table lists these laws that are briefly described in this section.

Federal Law

U.S. Constitution
- Commerce and Supremacy Clauses
- Fifth and Fourteenth Amendments

Federal Statutes
- National Environmental Policy Act (NEPA)
- Endangered Species Act (ESA)
- Clean Water Act (CWA)
- Safe Drinking Water Act (SDWA)
- Administrative Procedures Act (APA)
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act
- Central Valley Project Improvement Act (CVPIA)
- National Wild and Scenic Rivers Act

State Law

California Statutes
- California Environmental Quality Act (CEQA)
- California Endangered Species Act (CESA)
- Delta Protection Act (DPA)
- Water Quality Control Act
- California Safe Drinking Water Act
- Natural Community Conservation Planning Act
- California Wild and Scenic Rivers Act

Federal law. Federal law has a myriad of classifications. Two of these classifications are discussed below: the United States Constitution and federal statutes. From these laws, numerous agencies are both empowered and constrained in their oversight, governance and regulatory abilities that shape Delta water management and use.

U.S. Constitution: Commerce and Supremancy Clauses. Commonly known as the Commerce Clause, Article I, Section 8, of the United States Constitution states that "Congress shall have Power . . . To regulate Commerce . . . among the several States . . . ." Many Federal environmental statutes derive their authority to regulate private and State government behavior from the Commerce Clause, which has generally been interpreted to give the Federal government broad power over activities that affect interstate commerce. Without express authority from Congress or an indication that Congress did not intend to occupy the field of a particular regulatory area, the

Supremacy Clause in Article VI of the United States Constitution prohibits States from enacting legislation that is different than, or frustrates the purposes of, Federal statues.

U.S. Constitution: Fifth and Fourteenth Amendments. The Fifth Amendment of the United States Constitution requires just compensation be paid for private property taken for public use. The Fifth Amendment directly applies to takings by the Federal government and is applicable to takings by State and local governments via the Fourteenth Amendment. Takings can be characterized as either a permanent physical occupation or a regulatory taking. Recent court decisions could impact Delta water management if enforcement of environmental laws results in diversion restrictions for which the water right holder must be compensated consistent with the holding in *Tulare Lake Basin Water Storage Dist. v. U.S.*, 49 Fed. Cl. 313 (2003). In *Tulare Lake*, the court held that water use restrictions resulting used as mitigation under the Federal Endangered Species Act constituted compensable takings under the Fifth Amendment.

In other cases, like the recently decided *Stockton East Water District* case, the *Klamath Irrigation Districts* case, and the *Casitas Municipal Water District* case,[3] the Federal Claims Courts have denied takings claims related to water supply reductions caused by Endangered Species Act compliance. In short, this is an unsettled area of law.

Federal Statutes. The Federal government's authority to regulate activities in the Delta is derived from two predominant sources: (1) the Federal government's ability to regulate the actions of its own agencies; and (2) the Federal government's ability to regulate private and State behavior under the Commerce and Supremacy Clauses of the United States Constitution. Most environmental statutes enacted by Congress regulate behavior of private persons and State governments as well as activities of Federal agencies.

Endangered Species Act (ESA) [16 U.S.C. §§ 1531 to 1544]. The purpose of the Endangered Species Act (ESA) is to conserve the ecosystems upon which endangered species and threatened species depend and to provide a program for the conservation of such endangered species and threatened species. The Department of Interior is required to list species as threatened or endangered based upon certain criteria. At the time that a species is listed, and to the maximum extent prudent and determinable, the Department of Interior must designate a critical habitat for the listed species.

For actions of federal agencies, consultation with the Department of Interior (commonly referred to as a Section 7 Consultation) is required to insure that any

[3] Citations omitted

action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat.

The listing of threatened and endangered species present in the Delta, including the delta smelt and winter-run Chinook salmon, pursuant to the ESA, significantly affects actions by all water users. Most notably, the Delta has been designated as a critical habitat for the Delta Smelt and winter-run Chinook salmon. The following table is a list of the species included under ESA as threatened or endangered that can impact water management and use in the Delta.

Species Listed as Threatened or Endangered	
Invertebrates	**Plants**
Lange's metalmark butterfly (E)	large-flowered fiddleneck (E)
Conservancy fairy shrimp (E)	succulent (fleshy) owl's-clover (T)
longhorn fairy shrimp (E)	soft bird's-beak (E)
vernal pool fairy shrimp (T)	Contra Costa wallflower (E)
valley elderberry longhorn beetle (T)	Contra Costa goldfields (E)
delta green ground beetle (T)	Colusa grass (T)
vernal pool tadpole shrimp (E)	Antioch Dunes evening-primrose (E)
Fish	slender Orcutt grass (T)
green sturgeon (T)	Sacramento Orcutt grass (E)
delta smelt (T)	Solano grass (Crampton's tuctoria) (E)
Central Valley steelhead (T)	**Mammals**
Central Valley spring-run chinook salmon (T)	salt marsh harvest mouse (E)
winter-run chinook salmon, Sacramento River (E)	riparian brush rabbit (E)
Amphibians	San Joaquin kit fox (E)
California tiger salamander, central population (T)	**Birds**
California red-legged frog (T)	bald eagle (T)
Reptiles	California clapper rail (E)
Alameda whipsnake [=striped racer] (T)	California least tern (E)
giant garter snake (T)	
Species with Critical Habitat Proposed or Designated in the Delta	
Alameda whipsnake	Contra Costa wallflower
Antioch Dunes evening-primrose	delta green ground beetle
CA tiger salamander, central population	delta smelt
California red-legged frog	large-flowered fiddleneck
Central Valley fall/late fall-run chinook	longhorn fairy shrimp
Central Valley spring-run chinook	Solano grass (Crampton's tuctoria)
Central Valley steelhead	Suisun thistle
Colusa grass	vernal pool fairy shrimp
Conservancy fairy shrimp	vernal pool tadpole shrimp
Contra Costa goldfields	winter-run chinook salmon
Candidate Species	
Central Valley fall/late fall-run chinook salmon (C)	

E – Listed as endangered under the federal or state Endangered Species Acts
T – Listed as threatened under the federal or state Endangered Species Acts

National Environmental Policy Act (NEPA) [42 U.S.C. §§ 4321 to 4370f]. NEPA directs federal agencies to prepare an environmental impact statement (EIS) for all major federal actions that may have a significant effect on the environment. It states that it is the goal of the federal government to use all practicable means, consistent with other considerations of national policy, to protect and enhance the quality of the environment. It is a procedural law requiring all federal agencies to consider the environmental impacts of their proposed actions during the planning and decision-making processes. An EIS includes the environmental impacts of the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, alternatives to the proposed action, the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. NEPA does not generally require federal agencies to adopt mitigation measures or alternatives provided in the EIS.

The Clean Water Act (CWA) [33 U.S.C. §§ 1251 to 1387]. The purpose of the CWA is the restoration and maintenance of chemical, physical and biological integrity of the nation's waters. The CWA prohibits the discharge of any pollutant to navigable waters from any point source without a permit. The CWA uses a combination of technology-based and ambient water quality-based approaches to regulate the discharges of pollutants into navigable waters. The CWA also allows states to promulgate more stringent standards than those set by the EPA. Regulation under the CWA has numerous implications to the Delta.

Section 404 of the Clean Water Act requires that a permit must be obtained from the United States Army Corps of Engineers (the "Corps") before any dredged or fill material is discharged into the waters of the United States. The guidelines for complying with Section 404(b)(1) were developed by the United States Environmental Protection Agency (the "EPA"). These guidelines require, among other things, that an alternatives analysis be performed and that the selected project be the Least Environmentally Damaging Practicable Alternative (the "LEDPA"). Section 404(r) of the Clean Water Act provides an exception to the requirement that a Section 404 Permit must be obtained. The availability of this exception requires that the following criteria be satisfied:

- The project must be a Federal project specifically authorized by Congress;
- An EIS must be prepared pursuant to NEPA;
- The EIS must consider the guidelines developed under section 404(b)(1);
- The EIS must be submitted to Congress before the actual discharge of dredged or fill material in connection with the construction of the project; and

- The EIS must be submitted to Congress prior to either the authorization of the project or the appropriation of funds for the project.

The Safe Drinking Water Act (SDWA) [42 U.S.C. §§ 300f to 300j-26]. The SDWA directs the EPA to set maximum levels of primary and secondary contaminants in drinking water supplied by public water systems serving at least 25 individuals. The SDWA can affect the actions of State and Federal agencies even though the SDWA does not directly regulate water quality in the Delta. Because water in the Delta is used by public water systems, water quality in the Delta must be maintained so treatment to SDWA standards is practicable.

Administrative Procedure Act (APA) [5 U.S.C. §§ 551 to 559, 701 to 706]. The Administrative Procedure Act (APA) of 1946 governs the way in which administrative agencies of the United States federal government may propose and establish regulations. The APA also sets up a process for federal courts to directly review agency decisions. As such, it is an important source of authority within federal administrative law. The APA applies to both independent agencies and executive department agencies, and their subdivisions.

Migratory Bird Treaty Act [16 U.S.C. §§ 703 to 712]. This act implements various treaties for the protection of migratory birds and prohibits the "taking" (broadly defined) of birds protected by those treaties without a permit. The Secretary of the Interior determines conditions under which a taking may occur, and criminal penalties are provided for unlawfully taking or transporting protected birds. Liability imposed by this act was one of several factors leading to the decision to close the San Luis Drain and Kesterson Reservoir.

Fish and Wildlife Coordination Act [16 U.S.C. §§ 661 to 667e]. The Fish and Wildlife Coordination Act expresses congressional policy to protect the quality of the aquatic environment as it affects the conservation, improvement, and enjoyment of fish and wildlife resources. Under this act, any federal agency that proposes to control or modify any body of water, or to issue a permit allowing control or modification of a body of water, must first consult with the USFWS and with the head of the agency exercising administration over the wildlife resources of the state where construction will occur, with a view to the conservation of wildlife resources. This act works independently of the Endangered Species Act but its purposes are similar: to recognize the contribution of wildlife resources to the nation and to coordinate water-resource development programs with wildlife conservation and rehabilitation. Specifically, the Secretary of the Interior is authorized to provide assistance to, and cooperate with federal, state, and public or private agencies and organizations in: developing, protecting, rearing and stocking all species of wildlife and their habitat; controlling losses from disease or other causes; minimizing damages from overabundant species; providing public shooting and fishing

areas, including easements across public lands; and carrying out other necessary measures.

Reclamation Act of 1902 [Pub. L. No. 57-161, 32 Stat. 388]. On June 17, 1902, Congress passed the Reclamation Act to "[a]ppropriat[e] the receipts from the sale and disposal of public lands in certain States and Territories to the construction of irrigation works for the reclamation of arid lands." The Reclamation Act and its progeny established the authority for financing of the Central Valley Project (CVP). This body of law (collectively called "Reclamation Law") defined the purposes of Reclamation projects, uses for Reclamation water, and provisions for repayment of Federal investment.

The CVP was most recently reauthorized in 1992 with the enactment of the Central Valley Project Improvement Act (the "CVPIA"). The CVPIA modified the CVP's purposes. After the CVPIA, the CVP is to be used "first, for river regulation, improvement of navigation, and flood control; second for irrigation and domestic uses and fish and wildlife mitigation, protection and restoration purposes; and third for power and fish and wildlife enhancement."[4] Another important provision of CVPIA was Section 3406(b)(2) that authorized and directed the Secretary of the Interior to "dedicate and manage annually 800,000 acre-feet of Central Valley Project yield . . ." for various environmental purposes. This is commonly referred to as "b(2) water."

Magnuson-Stevens Fishery Conservation and Management Act (MSA) [16 U.S.C. § 1801 et seq.]. The Magnuson-Stevens Fishery Conservation and Management Act (MSA) governs the conservation and management of ocean fishing. It establishes exclusive U.S. management authority over all fishing within the exclusive economic zone, all anadromous fish throughout their migratory range except when in a foreign nation's waters and all fish on the Continental Shelf. The Act also establishes eight Regional Fishery Management Councils responsible for the preparation of fishery management plans to achieve the optimum yield from U.S. fisheries in their regions. The MSA requires Federal agencies to consult with the Secretary of Commerce regarding any action or proposed action authorized, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH).

State Statutes. *Introductory text to be written.*

California Environmental Quality Act (CEQA) [Public Resources Code § 21000 et seq.]. CEQA applies to discretionary government actions defined as projects. A project is defined a whole action which has the potential for resulting in a direct physical change

[4] The 1937 Rivers and Harbors Act specified that the dams and reservoirs of the CVP "shall be used, first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses; and, third, for power."

to the environment or a reasonably foreseeable indirect physical change to the environment. CEQA compliance is required for any proposed actions by state agencies that would change water management in the Delta. CEQA requires an Initial Study of the environmental impacts of the project. If the Initial Study determines that the project, without mitigation, may have a significant effect on the environment, an Environmental Impact Report should be prepared; otherwise an agency may prepare a Negative Declaration or Mitigated Negative Declaration.

CEQA provides that certain findings are considered significant, including a substantial reduction in the habitat of a fish or wildlife species; causing a fish or wildlife population to drop below self-sustaining levels; threatening to eliminate a plant or animal community; substantially reducing the number or restricting the range of an endangered, rare or threatened species.

California Endangered Species Act (CESA) [Fish and Game Code §§ 2050 et seq.]. The California Endangered Species Act is similar to the federal ESA. Listing decisions are made by the California Department of Fish and Game (DFG). All State lead agencies are required to consult with DFG about projects that impact State listed species. DFG is required to render an opinion as to whether the proposed project jeopardizes a listed species and to offer alternatives to avoid jeopardy. State agencies must adopt reasonable alternatives unless there are overriding social or economic conditions that make such alternatives infeasible. For projects causing incidental take of a listed species, DFG is required to specify reasonable and prudent measures to minimize the taking. Any take of a listed species that results from activities that are carried out in compliance with these measures is not prohibited. Many California species are both federally listed and State listed (see table below). CESA directs DFG to coordinate with the USFWS and NMFS in the consultation process so that consistent and compatible opinions or findings can be adopted by both federal and State agencies.

An example of the issues involved in coordinating efforts under CESA and the federal ESA, is illustrated in the recent efforts of DWR and DFG to comply with an Alameda County Superior Court order to stop the SWP's Delta export operations within 60 days unless the state complies with environmental laws designed to protect endangered fish. The court ruled that the DWR was in violation of the CESA because it never received state permits to take listed species. Rather than apply for a state permit, DWR has asked DFG to endorse federal permits that provide allowance for the taking of the listed species.

The complication in this proposed action is that the State's legal standard of CESA considers any taking as a jeopardy to the listed species, whereas the current federal permit is based more upon protecting the species from becoming extinct (i.e. the federal

permit allows more fish to be taken). Furthermore, the federal permit to allow take at the Delta pumps is being rewritten as a result of legal challenges.

Delta Protection Act of 1992 [Public Resources Code § 29700 et seq.]. In September of 1992, the California Legislature declared that the Sacramento-San Joaquin Delta, consisting of approximately 738,000 acres, is a natural resource of statewide, national, and international significance, containing irreplaceable resources and that it is the policy of the State to recognize, preserve, and protect those resources for the use and enjoyment of current and future generations. Accordingly, the Legislature modified the Delta Protection Act of 1959 to better achieve these objectives. The Act includes mandates for the designation of primary and secondary zones within the legal Delta, creation of a Delta Protection Commission, and completion of a Land Use and Resource Management Plan for the Primary Zone. The Act has recently been relied upon to address land-use planning issues in Yolo County but has not been used to address water management issues in the Delta.

Porter-Cologne Water Quality Control Act [Water Code § 13000 et seq.]. This Act is California's comprehensive water quality control law and is a complete regulatory program designed to protect water quality and beneficial uses of the State's water. The Act requires the adoption of water quality control plans by the State's nine Regional Water Quality Control Boards for watersheds within their regions. These plans are nominally reviewed and updated triennially, and their adoption is subject to the approval of the SWRCB and ultimately the federal EPA. Moreover, pursuant to Porter-Cologne, these basin plans shall become part of the California Water Plan[5], when such plans have been reported to the Legislature (Section 13141, California Water Code).

The legally defined Delta is subject to the jurisdiction of both the San Francisco Bay Regional Board and the Central Valley Regional Board. Actions and planning from these boards require coordination.

California Safe Drinking Water Act [Water Code § 116270 et seq.]. In 1976, California enacted its own Safe Drinking Water Act, requiring the Department of Health Services (DHS) to regulate drinking water, including: setting and enforcing federal and State drinking water standards; administering water quality testing programs; and administering permits for public water system operations. In 1989, significant

Delta Source Water Constituents of Concern
Bromide
Total organic carbon
Chloride
Nutrients
Total dissolved solids
Pathogens
Turbidity

[5] Existing water quality basin plans prepared by the SWRCB and RWQCB will eventually become part of the California Water Plan. In the future, those basin plans along with other water quality reports will be integrated regionally into the Water Plan's water portfolios.

amendments to the California act incorporated the new federal safe drinking water act requirements into California law, gave DHS discretion to set more stringent maximum contaminant levels (MCLs) for constituents of concern, and recommended public health goals for contaminants.

Natural Community Conservation Planning Act [Fish and Game Code § 2800 et seq.]. Adopted in 1991, California's Natural Community Conservation Planning Act establishes a program to identify the habitat needs of species before they become listed as threatened or endangered, and to develop appropriate voluntary conservation methods compatible with development and growth. Participants in the program develop plans to protect certain habitat and will ultimately enter into agreements with DFG to ensure that the plans will be carried out. Plans must be created so that they are consistent with endangered species laws.

California Wild and Scenic Rivers Act [Public Resources Code § 5093.50 et seq.] In 1972, the Legislature passed the California Wild and Scenic Rivers Act, declaring that specified rivers possess extraordinary scenic, recreational, fishery, or wildlife values, and should be preserved in a free flowing state for the benefit of the people of California. The Act declared that such use of the rivers would be the highest and most beneficial use within the meaning of Article X, Section 2 of the California Constitution. The act prohibits construction of any dam, reservoir, diversion, or other water impoundment on a designated river. Diversions needed to supply domestic water to residents of counties through which the river flows may be authorized, if the Secretary for Resources determines that the diversion will not adversely affect the river's free-flowing character. The major difference between the national and State acts is that if a river is designated wild and scenic under the State act, the Federal Energy Regulatory Commission (FERC) can still issue a license to build a dam on that river, thus overriding the State system.

Defining Familiar Regulatory Actions. The task of implementing federal and state laws is given to the executive agencies within government. The executive agencies, or implementing agencies, develop plans and programs to meet the requirements of enacted law. The following is a partial list of the regulations and regulatory actions that have legal significance in Delta water management and use.

The 1995 Regional Water Quality Control Plan. The 1995 Plan consisted of establishment, for the waters within a specified area, of the beneficial uses to be protected, water quality objectives, and a program of implementation. Components in the 1995 Plan included: (1) carry out provisions of the reasonable use doctrine (Cal. Const. Art. X, §2; Wat. Code §§100, 275, and 1050); (2) protect public trust resources (See National Audubon Society v. Superior Court (1983) 33 Cal.3d 419, 189 Cal.Rptr. 346); and (3) carry out statutory principles pertaining to water rights (Wat. Code §§183,

1243, 1243.5, 1251, 1253, and 1256-1258). The 1995 Plan addresses the interrelated fields of water quality and water supply and plans for their coordination.

SWRCB Decision 1641. SWRCB D-1641 is part of the implementation of the 1995 Bay-Delta Water Quality Control Plan (1995 Plan). Specifically, D-1641 amends certain water rights by assigning responsibilities to the persons or entities holding those rights to help meet the objectives of the 1995 Plan.

D-1641 began the process of implementing the 1995 Plan. D-1641 does the following things:

1. Accepts the contributions that settlement agreements have to meet the 1995 Plan objectives
2. Continues interim responsibility for those flow objectives for DWR and Reclamation
3. Approves the change in point of diversion of the CVP and SWP in the Southern Delta
4. Approves changes in the place of use of CVP water
5. Recognizes VAMP and approves the water rights changes needed to conduct VAMP
6. Recognizes a number of agreements between entities involved in Delta water issues

X2. Pursuant to the ESA, the U.S. Fish and Wildlife Service (FWS) listed the Delta Smelt as a threatened species in 1993. In 1994, FWS issued a biological opinion (BO) designating portions of the Delta as critical habitat for the Delta Smelt. Coordinated efforts between FWS and the EPA resulted in the water quality standards in the Delta commonly referred to as "X2." Water quality standards were set by the EPA pursuant to Section 303 of the CWA in its final ruling issued on January 24, 1995. X2 refers to the requirement that a salinity level front of two parts per thousand or less be maintained at particular monitoring locations within the Delta during certain times between the February through June period depending on the amount of precipitation. The location of X2 corresponds with the mixing zone of fresh and salt water. The location of X2 within Suisun Bay during the February through June period is thought to be directly and/or indirectly related to the reproductive success and survival of the early life stages for a number of estuarine species, including Delta Smelt. Additional details on X2 can be found in Chapter 9 of the Environmental Water Account Draft EIS/EIR (July 2003).

CVPIA B(2) Actions. Implementation of the Central Valley Project Improvement Act (CVPIA) affects water management in the Delta. As described above, the CVPIA changed the relative priorities of various CVP purposes elevating fish and wildlife

protection as equal to water supply for agricultural and urban uses. In addition, CVPIA dedicated 800,000 acre-feet of CVP yield annually, referred to as "b(2) water," for the purpose of implementing the fish, wildlife, and habitat restoration purposes and measures and to assist the State of California to protect the waters of the Bay-Delta Estuary. The CVPIA also committed water to wildlife refuges south of the Delta and promoted water transfers to help meet project purposes.

The following is an excerpt from the CALFED Operations Coordination Group's summary of 2006 b(2) operations (http://wwwoco.water.ca.gov/calfedops/notes/2006/dec/final_wy06_b2_actions.pdf):

- Closed **Delta cross channel** gates December 3, 2005 to protect emigrating juvenile salmonids from the Sacramento basin, including listed Chinook salmon and steelhead.
- Maintained the **Sacramento River** at approximately 5,000 cfs in December to maintain habitat conditions for Chinook salmon and steelhead
- Reduced **Delta exports** to approximately 6,000 cfs (combined) from April 26 – May 2, 2006 to protect emigrating juvenile San Joaquin basin salmon.
- Reduced **Delta exports** May 3 – June 2, 2006 to protect juvenile Chinook salmon, delta smelt and conduct the VAMP experiment, which examines the relationship between Vernalis flows, export levels, and survival of emigrating juvenile San Joaquin basin salmon.
- Maintained a reduced **Delta export** level of 6,000 cfs (combined) from June 3 - 21 to help protect emigrating juvenile San Joaquin basin salmon.

Overall, the operations group noted that due to the wet conditions in Water Year 2006 only 422,000 AF of (b)(2) water was used for fish actions, and approximately 195,000 AF was banked in Shasta Reservoir. The remaining 183,000 AF was made available for other CVP project purposes.

VAMP. The Vernalis Adaptive Management Plan (VAMP) is an outgrowth of D-1641. VAMP is a large-scale experimental management program designed to protect junvenile Chinook salmon migrating from the San Joaquin River through the Sacramento-San Joaquin Delta. VAMP is also a scientific experiment to determine how salmon survival rates change in response to alterations in San Joaquin River flows and SWP and CVP exports with the installation of the Head of Old River Barrier. VAMP correlates average outflows at Vernalis with Average SWP and CVP exports from the Delta.

A summary of VAMP experimental test conditions over the past six years is below:

Year	VAMP Period	Average Vernalis Flow (cfs)	*Average SWP/CVP Exports (cfs)*
2000	4/15-5/15	5,869	2,155
2001	4/20 – 5/20	4,220	1,420
2002	4/15-5/15	3,300	1,430
2003	4/15-5/15	3,235	1,446
2004	4/15-5/15	3,155	1,331
2005	5/1-5/31	10,390	2,986

Biological Opinion on the Long-term CVP and SWP OCAP. In October of 2004, the NMFS issued a biological opinion (BO) for the State and federal operations under OCAP. This BO superseded any previous BO issued for OCAP. The issuance of a BO, as required under ESA Section 7 consultation, sets forth allowances for incidental take of protected species, as well as establishes non-discretionary actions to minimize any take. The October 2004 BO is well over 200 pages and is based upon a Biological Assessment provided by Reclamation and DWR earlier the same year. Illustrative excerpts from the conditions of the BO are provided below:

> Reclamation and DWR have proposed to operate CVP and SWP facilities in accordance with either plans, agreements, or specific criteria outlined in this biological opinion. Total upstream plus Delta losses above the current baseline, due to the proposed action, are estimated at 7 percent for Sacramento River winter-run Chinook salmon, 10 percent for Central Valley springrun Chinook salmon, and 18 percent for Central Valley steelhead in all but critically dry water year conditions. (p. 211)
>
> In the accompanying formal biological opinion, NOAA Fisheries has determined that the anticipated level of take associate with proposed project operations is not likely to result in jeopardy to the continued existence of Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, or Central Valley steelhead. (p. 212)
>
> NOAA Fisheries believes the following reasonable and prudent measures are necessary and appropriate to minimize take of Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, and Central Valley steelhead [*which is followed by approximately 26 pages of non-discretionary measures listed in the BO*]. (p. 212).

Monterey Agreement. In 1994, DWR and certain representatives of the SWP contractors agreed to a set of principles, known as the Monterey Agreement, to settle long-term water allocation disputes, and to establish a new water management strategy for the SWP. The disputes focused on the phrasing of Article 18 of the SWP contracts, which addresses the allocation of shortages in water supply, and particularly under what circumstances the initial reductions to agricultural use should be imposed prior to reducing allocations to urban contractors. The Monterey Agreement resolved the allocation controversy by proposing contract revisions to eliminate initial agricultural use cutbacks and specifying that all project water was to be in proportion to contract amounts.

DWR has been operating the SWP consistent with the provision of the Monterey Amendment since 1996. However, a lawsuit filed in December 1995 challenged the adequacy of the 1995 Monterey Agreement EIR. In 2000, the court held that the EIR failed to adequately analyze the impacts of deleting Article 18(b) (the provision for reallocation of water among contractors in the event of a defined permanent water shortage) and directed that a new EIR be prepared. The court held the lack of an environmental analysis of eliminating Article 18(b) deprived public agencies and the public of information essential to understanding the environmental consequences of the provision's elimination, including the potential effect on land use planning decisions. DWR is expecting a Draft EIR in the summer of 2007.

The Bay Delta Conservation Plan. The Bay Delta Conservation Plan (BDCP) is intended to be a conservation plan prepared to meet the requirements of the ESA, CESA, and the NCCPA.[6] The goal of the Plan is to provide for the conservation and management of aquatic species and regulatory assurances related to water supply reliability and water quality for the Delta. The BDCP is intended to result in take permits from state and federal agencies for BDCP covered activities (e.g. water operations, storage, conveyances, and management in the Delta). The Plan may also provide the basis of Section 7 and Section 10 ESA compliance. The goal of the BDCP is to provide for the conservation of "covered species" including both listed and non-listed species.

Institutional framework. As evident by the figure below, a large number of institutions play a key role in the enforcement of the aforementioned laws that implicate the management and use of water in the Delta.

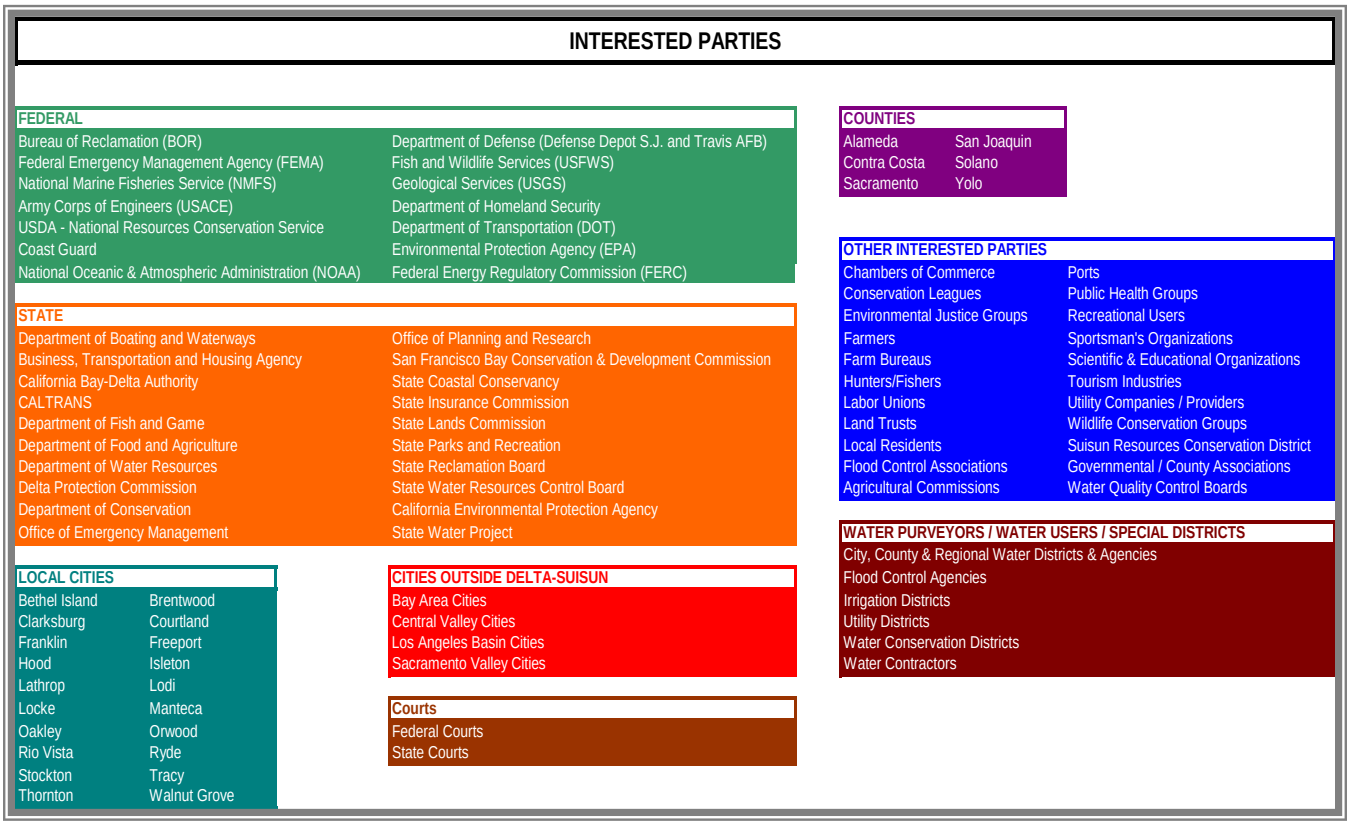
Federal government. Federal agencies are charged with execution of federal mandates and regulations. Some federal agencies have duties to carry out certain

[6] The NCCPA is the Natural Community Conservation Planning Act described in section 3.2.

actions, projects and programs, while others are purely regulatory in nature. Actions and projects often require coordination between multiple agencies.

State government. As illustrated in the figure above, numerous State entities affect Delta management. Many of those listed play a significant role in management of water supplies including the Department of Water Resources, Bay-Delta Authority, Department of Fish and Game, State Water Resources Control Board, State Reclamation Board, California Environmental Protection Agency, Delta Protection Commission and Department of Boating and Waterways. Coordination between numerous State agencies is often required for actions, programs and projects that affect management of the Delta. In addition, State agencies are often required to consult with federal agencies to ensure compliance with federal regulations.

Local jurisdictions (cities and counties). Numerous cities and counties adjacent to the Delta divert water directly from the Delta for their water supplies and therefore have a direct interest in its management. In addition to laws and regulations affecting management of water supplies, land use within some areas is regulated by the Delta Protection Act. Cities outside of the Delta region, such as cities in southern California, receive their water supplies from the Delta through contracts for water from the State Water Project and Central Valley Project.



Water purveyors/Water users/Special districts. Numerous water purveyors, water users and special districts have an interest in management of water supplies in and through the Delta. The various forms of water districts that provide water to urban customers, irrigation districts that supply water to agricultural users, utility districts and conservation districts are all formed for different purposes that are frequently at odds. Many are local to the Delta while others receive water through the State Water Project and Central Valley Project.

Other interested parties. Other interested parties that do not receive water from the Delta or otherwise have a governance role in its management can exert significant political and legal pressure on management of water supplies in and through the Delta. Environmental protection, support of local economies, preservation of recreational uses and promotion of local economies are some of the objectives of these entities.

Courts. Federal and State courts also exercise jurisdiction of Delta water management and use. The Federal courts generally address issues of federal law and federal water contracts while the state courts generally address issues of state law. The federal courts jurisdiction over interpretations of the various federal statutes and constitutional provisions are important considerations in Delta planning. Similarly, the state court interpretations of state law issues – particularly as applied to water rights and

water planning – may also be major components in the overall management of Delta water supplies.

Conflicts in regulatory systems. The fundamental concern in water management and use in the Delta is the interplay of law and regulations among local, regional, state, and federal agencies. This interplay manifests through incompatible laws enacted by different government entities. The interplay also develops in the management of land use, environmental, and water resources within a single government entity or among agencies at the same level of government.

Federal supremacy in law. Governance in the United States is based on a system under which federal and state governments are granted specific powers. The United States Constitution both limits and empowers the Federal government, while the remaining powers not delegated to the federal government or prohibited by it are reserved to state governments. Under this arrangement, it is often necessary to decide whether the federal or state government has power over a particular subject matter when federal and state regulatory schemes do not further similar objectives. This issue could arise when federal environmental regulations conflict with property rights. For example, what happens when regulations under the Endangered Species Act require that a holder of a pre-1914 water right to curtail water diversions to protect the habitat of a listed species? Does the federal government's power to regulate waters of the United States trump California's water rights scheme, or does it constitute a taking under the Fifth Amendment requiring the federal government to compensate for the loss of use of the water? This is but one example of potential issues involving federal and state powers.

Incongruity in implementing law and regulations. Government laws and regulations affecting management of water supplies which are executed and enforced by governmental agencies can often "frustrate the purpose" of other agencies. Agencies may be working separately to further similar objectives but may not be coordinating to ensure that their methods do not conflict. Many laws and regulations also have provisions that require one agency to halt the project or action of another through consultation processes. Further, the development of regulations by the numerous agencies can also be done without consultation from other interested parties, often leading to additional and/or conflicting standards.

Section 4. References

To be developed.